

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

Claims 1-23. (canceled).

Claim 24. (currently amended): A method for synchronization of base stations in a mobile communications network, the method comprising the steps of:

transmitting time information via a packet-oriented local area network to the base stations;

adjusting a clock transmitter for a respective base station which receives the time information based on reception time and time information content of the time information; ~~and~~

controlling ~~transmission of functional sequences of respective base stations,~~ which relate to ~~a transmission of~~ radio time frames, ~~to the respective base station by~~ based on signals from the clock transmitter;

temporarily storing a data stream, which is received via the local area network from a base station, in an input buffer store which operates on a first-in-first-out principle;

reading data elements from the data stream for further processing using a clock cycle governed by the clock transmitter;

recording a filling level over the input buffer store; and

readjusting the clock frequency of the clock transmitter based on the recorded filling level, wherein the adjustment of the clock transmitter based on the received time information is given priority over the adjustment of the clock transmitter based on the recorded filling level.

Claim 25. (previously presented): A method for synchronization of base stations in a mobile communications network as claimed in claim 24, wherein the step of adjusting the clock transmitter includes readjusting one of a frequency and a phase of the clock transmitter.

Claim 26. (previously presented): A method for synchronization of base stations in a mobile communications network as claimed in claim 24, wherein the step of adjusting the clock transmitter includes one of omitting and inserting clock pulses.

Claim 27. (previously presented): A method for synchronization of base stations in a mobile communications network as claimed in claim 24, the method further comprising the step of requesting the time information by the respective base station via the local area network from a time information server.

Claim 28. (previously presented): A method for synchronization of base stations in a mobile communications network as claimed in claim 27, the method further comprising the step of employing a standardized network protocol for the steps of requesting and transmitting the time information.

Claim 29. (previously presented): A method for synchronization of base stations in a mobile communications network as claimed in claim 27, the method further comprising the steps of:

- measuring a time difference between the request for and a reception of the time information;

- determining an estimated value for propagation time of the time information from the time information server to the respective base station from the measured time difference; and

- adjusting the clock transmitter using the determined estimated value of propagation time of the time information.

Claim 30. (previously presented): A method for synchronization of base stations in a mobile communications network as claimed in claim 29, wherein the step of measuring the time difference is performed via the clock transmitter in the respective base station.

Claim 31. (previously presented): A method for synchronization of base stations in a mobile communications network as claimed in claim 29, wherein the step of determining the estimated value for propagation time of the time information includes one of averaging over a plurality of measured time differences and averaging over a plurality of variables defined from the plurality of measured time differences.

Claim 32. (previously presented): A method for synchronization of base stations in a mobile communications network as claimed in claim 27, wherein the time information is requested by the respective base station at regular time intervals via the local area network.

Claim 33. (previously presented): A method for synchronization of base stations in a mobile communications network as claimed in claim 29, wherein the time information is requested by the respective base station via the local area network at time intervals which are dependent on a severity with which the measured time differences vary.

Claim 34. (canceled).

Claim 35. (currently amended): A method for synchronization of base stations in a mobile communications network as claimed in claim ~~34~~24, wherein the data stream includes communications data to be transmitted to a mobile terminal.

Claim 36. (canceled).

Claim 37. (previously presented): A method for synchronization of base stations in a mobile communications network as claimed in claim 24, wherein time information from a plurality of time information servers is received by the respective base station via the local area network and used for adjustment of the clock transmitter.

Claim 38. (currently amended): A system for synchronization of base stations in a mobile communications network, comprising:

a packet-oriented local area network;

a time information server, coupled to the local area network, having a timer device for transmitting time information via the local area network; and

a plurality of base stations coupled to the local area network, wherein each of the base stations ~~includes~~ comprises:

parts for synchronization of a time measure for the respective base station based on time information which is transmitted via the local area network,

a clock transmitter,

a time information receiving device for extracting the time information from a data stream which has been received via the local area network,

a clock adjustment device for adjusting a clock transmitter based on reception time and time information content of the received time information,

a control device for controlling timing of functional sequences, which relate to transmission of radio timeframes, based on signals from the clock transmitter,

an input buffer store for temporarily storing a data stream which is received via the local area network,

a filling level recording device for recording a filling level of the input buffer store, and

a clock frequency control device for readjusting a clock frequency of the clock transmitter as a function of the recorded filling level,

wherein data elements are read from the data stream for further processing using a clock cycle governed by the clock transmitter and a filling level is recorded over the input buffer store; and wherein the clock frequency of the clock transmitter is readjusted based on the recorded filling level, wherein the adjustment of the clock transmitter, based on the received time information, is given priority over the adjustment of the clock transmitter based on the recorded filling level.

Claim 39. (canceled).

Claim 40. (currently amended): A system for synchronization of base stations in a mobile communications network as claimed in claim ~~39~~38, wherein the time information server includes a satellite navigation receiver device for receiving world time information and for presetting a time measure for the time information server based on the received world time information.

Claim 41. (currently amended): A system for synchronization of base stations in a mobile communications network as claimed in claim ~~39~~38, wherein each of the base stations further includes a time checking device for requesting the time information via the local area network.

Claim 42. (previously presented): A system for synchronization of base stations in a mobile communications network as claimed in claim 41, wherein each of the base stations further includes a time measurement device for measuring a time difference between a request for and reception of the time information, a propagation time determination device for determining an estimated value of propagation time of the time information from the time information server to the respective base station based on the measured time difference, and a propagation time correction device for correcting the time information for its estimated propagation time.

Claim 43. (previously presented): A system for synchronization of base stations in a mobile communications network as claimed in claim 42, wherein the time measurement device is a counter which counts signals from the clock transmitter.

Claim 44. (canceled).

Claim 45. (currently amended): A system for synchronization of base stations in a mobile communications network as claimed in claim ~~39~~38, wherein each of the base stations further includes a PLL circuit for controlling a clock frequency of the clock transmitter.

Claim 46. (previously presented): A system for synchronization of base stations in a mobile communications network as claimed in claim 38, wherein the base stations are adjacent in the local area network.